

**What is claimed:**

*Sub A1*  
of:

1. A method for manufacturing a corrugated board, comprising the steps of:
  - supplying a first web of medium having a first and second sides, each side of the first web having a plurality of flutes, and each flute having a crest;
  - supplying a second web of medium;
  - applying a wetting agent to a plurality of crests on the first side of the first web;
  - applying an adhesive composition to the plurality of crests on the first side of the first web; and
  - securing the second web to the plurality of crests on the first side of the first web to form a single-faced corrugated board.

2. The method of claim 1, wherein the step of applying a wetting agent to the plurality of crests on the first side of the first web comprises applying a water composition to the plurality of crests on the first side of the first web at a predetermined rate, and wherein the predetermined rate comprises one of a constant rate and a variable rate.

*Sub A2*

3. The method of claim 1, wherein the step of applying a wetting agent to the plurality of crests on the first side of the first web comprises applying a wetting

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agent to the plurality of crests on the first side of the first web prior to applying an adhesive composition to the plurality of crests on the first side of the first web.

4. The method of claim 1, wherein the step of applying a wetting agent to the crests on the first side of the first web comprises using a first water supply device to apply a water composition to the crests on the first side of the first web, and wherein the first water supply device comprises one of an anilox system, a sprayer, a plurality of rollers, a rod coater, and a belt system.

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5. The method of claim 1, wherein the step of applying an adhesive composition to the plurality of crests on the first side of the first web comprises applying one of a starch composition and a water-based adhesive composition to the plurality of crests on the first side of the first web.

6. The method of claim 1, wherein the step of applying an adhesive composition to the plurality of crests on the first side of the first web comprises applying the adhesive composition after applying the wetting agent to the plurality of crests on the first side of the first web, and wherein the starch composition comprises one of maize starch, wheat starch, potato starch, and tapioca.

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7. The method of claim 1 further comprising the steps of:  
supplying the single-faced corrugated board;  
supplying a third web of medium;  
applying the wetting agent to the plurality of crests on the second side of the first web of the single-faced corrugated board;  
applying the adhesive composition to the plurality of crests on the second side of the first web of the single-faced corrugated board; and  
securing the third web to the plurality of crests on the second side of the first web of the single-faced corrugated board to form a double-backed corrugated board.

8. The method of claim 7, wherein the step of applying a wetting agent to the plurality of crests on the second side of the first web of the single-faced corrugated board comprises applying a water composition to the plurality of crests on the second side of the first web of the single-faced corrugated board prior to applying the adhesive composition to the plurality of crests on the second side of the first web of the single-faced corrugated board.

9. The method of claim 7, wherein the step of applying a wetting agent to the plurality of crests on the second side of the first web of the single-faced corrugated board comprises using a second water supply device to apply a water composition to the plurality of crests on the second side of the first web of the single-faced corrugated board.

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faced corrugated board, and wherein the second wetting device comprises one of an anilox system, a sprayer, a plurality of rollers, a rod coater, and a belt system.

*Sub a 1*

10. An apparatus for manufacturing a corrugated product comprising:  
a corrugating device adapted to form a plurality of flutes on a first and second  
sides of a first web of medium, each flute having a crest;  
a wetting device adapted to apply a wetting agent to a plurality of crests on  
the first side of the first web;  
an adhesive supply device adapted to apply an adhesive composition to the  
plurality of crests on the first side of the first web; and  
a securing device adapted to secure a second web of medium to the plurality  
of crests on the first side of the first web to form a single-faced corrugated board.

*Sub a 1*

11. The apparatus of claim 10, wherein the corrugating device comprises:  
a first corrugating roll and a second corrugating roll.

12. The apparatus of claim 10, wherein the wetting device comprises one  
of an anilox system, a sprayer, a plurality of rollers, a rod coater, and a belt system.

13. The apparatus of claim 12, wherein the anilox system comprises a  
applicator roll, a doctor blade and a storage device, and wherein the storage device is  
adapted to contain the wetting agent.

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14. The apparatus of claim 12, wherein the anilox system comprises a first roll, a second roll, and a storage device, and wherein the storage device is adapted to contain the wetting agent.

15. The apparatus of claim 10, wherein the wetting device is adapted to apply a wetting agent to the plurality of crests on the first side of the first web prior to the adhesive supply device applying an adhesive composition to the plurality of crests on the first side of the first web.

16. The apparatus of claim 10, wherein the wetting device is a first wetting agent supply device, and wherein the apparatus further comprises a second wetting agent supply device, the second wetting agent supply device being adapted to apply a wetting agent to the plurality of crests on the second side of the single-faced corrugated board.

17. The apparatus of claim 16, wherein the adhesive supply device is a first adhesive supply device, and wherein the apparatus further comprises a second adhesive supply device adapted to apply an adhesive composition to the plurality of crests on second side of the first web.

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18. An apparatus for manufacturing corrugated boards comprising:  
first and second corrugated rolls rotationally engaged with each other;  
first and second wetting rolls disposed for rotation in a first reservoir;  
first and second adhesive rolls disposed for rotation in a second reservoir; and  
a securing roll disposed to rotationally engage the first corrugated roll.
19. The apparatus of claim 18, wherein the first and second wetting rolls are positioned such that the wetting rolls engage a web of medium prior to the first and second adhesive rolls.
20. A corrugated article manufactured according to the steps comprising:  
supplying a first web of medium having a first and second sides, each side of the first web having a plurality of flutes, and each flute having a crest;  
supplying a second web of medium;  
applying a wetting agent to a plurality of crests on the first side of the first web;  
applying an adhesive composition to the plurality of crests on the first side of the first web; and  
securing the second web to the plurality of crests on the first side of the first web to form a single-faced corrugated board.

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